UNIVERSITI TEKNOLOGI MARA

THE PERFORMANCE MEASURES OF SUPPLY CHAIN MANAGEMENT FOR INFRASTRUCTURE PROJECT

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of the requirements for the degree of
Master of Science

Faculty of Architecture, Planning & Surveying

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CONFIRMATION BY PANEL OF EXAMINERS

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ABSTRACT

The contribution of infrastructure to the development of country mainly Malaysia cannot be refused and this encourages the government to provide an established infrastructure facility. However, the problem facing by most of infrastructure project in term of management aspects such as management conflict and unsatisfied output becomes an obstacle to fulfill the government strategy. Thus a comprehensive management tool such as SCM is required as it is functioning as an overall management process to monitor and control all such logistic activities. Unfortunately, in reality, there was an issue to improve performance of supply chain due to lack of comprehensive view of SCM concept and lack of reliable measure to evaluate the process and operations of the supply chain. Thus, to overcome these issues, this research had designated an objective as follows 1) establish the most relevant indicator for performance measure of SCM through conceptual design 2) establish relevance indicators for performance measurement of supply chain through the perception of key players in infrastructure project 3) generate performance measurement framework of SCM in infrastructure project. The first approach of this research through conceptual design which involved literature review and expertise justification had identified six (6) performance indicators that were information dissemination, management, leadership, relationship development, customer management, activity sequences and green supply chain. This performance indicator had been used as the main reference to create the questionnaire. A total of 1000 survey form that consists of 50 questions had been sent randomly to key players of the Malaysian infrastructure project, namely implementer, client, consultant, and contractor/supplier. After 8 month period, about 225 forms had been received. The statistical analysis that's been used to form, verify and test the reliability of this questionnaire had identified *five (5) performance indicators that were information dissemination, management leadership, relationship development, customer management and activities sequences*. Besides that, this research had applied performance measurement framework of supply chain based on modification of SCOR model with performance measurement concept as a main reference. Hence, this framework that generated by 39 base measures at Level 2 (process category), clustered into 11 derived measures at Level 1 (process type) to form 5 performance indicator at main criteria could be used to evaluate, improve and control the performance of supply chain and as a reference for the key players to develop detailed guidelines that suit with the organization field or environment.

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